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WHAT IS CLAIMED IS:

- Def 2* 1. A motion transmission and multiplication system comprising:
- at least first and second elements extending in the same orientation; and
- at least a first means linking said first and second elements and being movable with respect to at least one of them,
- said first linking means being arranged on said first element such that when said first linking means is provided with a driving motion in a direction of said orientation, said first and second elements are provided with a driven motion with respect to each other.
2. The system of claim 1 wherein said driving motion is in the same direction as said driven motion of said second element.
3. The system of claim 1 wherein said driving motion is in the opposite direction of said driven motion of said second element.
- Def 3* 4. The system of claim 1 wherein said driving motion is provided by hand motion of said linking means with respect to an end of either of said first and second elements.
5. The system of claim 1 wherein said second element is nested within said first element and arranged for telescopically-driven motion therein, said first linking means comprising a flexible loop attached at a posterior portion of said second element and arranged such that said driving motion is loop-type on said first element, to provide said telescopically-driven motion.

6. The system of claim 5 further comprising an elastic hose connected internally between said first and second elements to enable flow of materials between input and output ends thereof.
7. The system of claim 6 further comprising a speed control element associated with said first and second elements for operating an apparatus in relation to said driven motion.
8. The system of claim 5 further comprising a third element nested within said second element and arranged for telescopically-driven motion therein, said third element being linked to said first element by a second linking means comprising a second flexible loop being attached at a posterior portion of said third element and being arranged such that said driving motion is loop-type on said second element, to provide said telescopically-driven motion of said third element.
9. The system of claim 1 wherein said second element is nested within said first element and arranged for telescopically-driven motion therein, said first linking means comprising a first rack arranged such that said driving motion is of a sliding-type on said first element, said first rack engaging a pinion gear rotatably supported at an anterior portion of said first element, a gearwheel coaxial with said pinion gear engaging a second rack mounted on said second element such that said sliding-type driving motion of said first rack on said first element provides said telescopically-driven motion.
10. The system of claim 9 wherein a gear ratio between said

pinion gear and gearwheel fixes said telescopically-driven motion.

11. The system of claim 1 wherein said second element is nested within said first element and arranged for telescopic motion therein, said first linking means comprising a toothed flexible loop arranged such that said driving motion is of a loop-type on said first element, said toothed loop engaging a pinion gear rotatably supported at an anterior portion of said first element, a gearwheel coaxial with said pinion gear engaging a second rack mounted on said second element such that said loop-type driving motion of said toothed flexible loop on said first element provides said telescopically-driven motion.

12. The system of claim 11 further comprising a motor connected to said gearwheel for driving said loop-type motion.

13. The system of claim 1 wherein said second element is nested within said first element and arranged for telescopically-driven motion therein, said first linking means comprising a first rigid arm attached at an anterior portion of said second element and arranged such that said driving motion is of a sliding-type on said first element, to provide said second element with said telescopically-driven motion.

14. The system of claim 13 further comprising a third element nested within said second element and arranged for telescopically-driven motion therein, and second and third linking means, said second linking means developing driven motion in response to said driving motion of said first linking means, said third linking means developing driven motion in

response to said driven motion of said second linking means, to provide said telescopically-driven motion of said third element.

15. The system of claim 14 wherein said second linking means comprises a flexible loop arranged for loop-type motion on said first rigid arm, and said third linking means comprises a second rigid arm arranged for sliding-type motion on said first rigid arm, said loop being attached to an anterior portion of said first element, said second rigid arm being attached between said loop and said third element.

16. The system of claim 1 wherein said first element is a first rigid arm and said second element is a second rigid arm which slides thereon, said first rigid arm having a flexible loop arranged for loop-type driving motion between its ends, said second rigid arm being attached at a posterior end to said flexible loop such that when said loop-type driving motion is provided, said second rigid arm is provided with driven motion.

17. The system of claim 16 provided as a kit for self-assembly and attachment to a set of elements to be nested one within another for providing telescopically-driven motion.

18. The system of claim 16 further comprising a set of first, second and third elements nested within one another and arranged for telescopically-driven motion between them, said first rigid arm being arranged for sliding-type driving motion on said first element, and being attached to an anterior portion of said second element, said flexible loop being attached to said

first element, and said second rigid arm being attached to said third element to provide said telescopically-driven motion.

B 19. The system of claim 18, ^{in combination} ~~adapted for use~~ with nested vacuum cleaner rods arranged for telescopically-driven motion.

20. The system of claim 19 further comprising an expandable elastic tube within said vacuum cleaner rods for suction transfer.

21. The system of claim 19 further comprising an expandable elastic tube external to said vacuum cleaner rods for suction transfer.

22. The system of claim 19 further comprising an elastic sleeve around said rod elements to maintain a dust/dirt barrier.

23. The system of claim 1 further comprising a motorized screw and a third element nested within said second element and arranged for telescopically-driven motion therein, said motorized screw being arranged such that said driving motion is screw-type on said second element, to provide said third element with said telescopically-driven motion.

a 24. The system of claim 23 further comprising limit switches mounted ^{on} ~~at~~ least one of said elements for electrically controlling said screw-type driving motion.

25. The system of claim 1 further comprising a central element disposed proximate said first and second elements, said central element having an element slidably mounted thereon and being connected to provide sliding-type driving motion to said

first linking means.

B 26. The system of claim 25 ^{in combination} ~~adapted for use~~ with a tripod having a plurality of legs each pivotable at an end of said central element and being arranged for said telescopically-driven motion.

B 27. The system of claim 25 ^{in combination} ~~adapted for use~~ with a music stand having a plurality of legs each pivotable at an end of said central element and being arranged for said telescopically-driven motion.

B 28. The system of claim 25 ^{in combination} ~~adapted for use~~ with an umbrella which opens and closes with said driven motion.

B 29. The system of claim 25 ^{in combination} ~~adapted for use~~ with a parasol which opens and closes with said driven motion.

30. The system of claim 25 further comprising a second central element and a second set of first and second elements, all being spaced apart from said central element, adapted for use with an awning, which opens and closes with said driven motion.

31. The system of claim 1 further comprising a third element nested within said second element and arranged for telescopically-driven motion therein, said third element being linked to said first element by a spring-loaded tape tending to telescopically close said first, second and third elements together, said spring-loaded tape being calibrated with measurements such that driving motion of said first linking means provides said spring-loaded tape with telescopically-driven

motion to enable distance measurement.

32. The system of claim 1 adapted for use with a tape measure.

33. The system of claim 1 further comprising a tool attached proximate at least one end of one of said first and second elements.

34. The system of claim 33 wherein said tool is a drill and said first and second elements are rotatable about a common axis.

35. The system of claim 33 further comprising control means for determining a working angle of said tool angle in relation to said driven motion of said first and second elements.

36. The system of claim 1 wherein said linking means is enclosed within at least one of said first and second elements.

37. The system of claim 1 wherein said first and second elements are rotatable about a common axis.

38. The system of claim 1 wherein said first and second elements are movable side-by-side in tracks disposed adjacent one another.

39. The system of claim 38 adapted for use with curtains, which ^{open and close} ~~opens and closes~~ with said driven motion.

40. The system of claim 38 adapted for use with shutters, which open and close with said driven motion.

41. The system of claim 38 further comprising rollers mounted at the ends of said first and second elements for guiding said movement in said tracks.
42. The system of claim 38 adapted for use as a conveyor, which opens and closes with said driven motion and which has cargo placed anywhere on at least one of said first and second elements.
43. The system of claim 1 adapted for use as a wind instrument.
44. The system of claim 1 adapted for use as a percussion instrument.
45. The system of claim 1 adapted for use with illumination.
46. The system of claim 1 adapted for use on a sailboat mast.
47. The system of claim 1 adapted for use as an assembly toy.
48. The system of claim 1 wherein either of said first and second elements has mounted at an end thereof a surface for supporting at least one of a tool and an electrical device for telecommunications, control, home entertainment and the like, with flexible wiring, cable, tubes and the like, being extendible during motion of said first and second elements, at least one of said first and second elements being supported overhead in a room to enable positioning of said surface at a desired position.

Part 48

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